

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEW JERSEY

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SAFETY RAIL SOURCE, LLC,

Plaintiff,

v.

BILCO COMPANY,

Defendant.

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HON. JEROME B. SIMANDLE

Civil No. 06-5598 (JBS)

**OPINION**

APPEARANCES:

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**SIMANDLE**, District Judge:

**I. INTRODUCTION**

This patent lawsuit centers around United States Patent No. 6,467,230 (the "'230 patent"), an "invention relat[ing] to an interconnection device and method for securing a safety rail . . . to the frame of an access hatch." (Def.'s Br. Ex. A ("'"230 patent"), col. 1, l. 6-10.) Plaintiff filed this lawsuit against

Defendant, asserting that a device made and sold by Defendant - the Bil-Guard Hatch Rail system (the "Bil-Guard") - infringed on the '230 patent, and Defendant filed a counterclaim, arguing that the '230 patent is invalid.

Presently before the Court are the claim construction issues raised in the parties' Markman briefs. Originally, the parties disputed the meanings of eight terms,<sup>1</sup> which appear in the five claims asserted herein. Seven of the disputed terms appear in claim 1 of the '230 patent, upon which claims 2, 9, and 12 are dependent. The eighth term ("elongate post member") appears in claim 11 alone, although it is substantially similar to one of the disputed terms contained in claim 1. As the Court explains below, at the Markman hearing, the parties agreed to the construction of four of these terms.<sup>2</sup> For the reasons now explained, the Court will adopt the following constructions of the terms that remain in dispute.

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<sup>1</sup> The initially disputed terms, as the discussion below makes clear, are: "elongate member," "elongate post member," the "receiving portion," the "end of the receiving portion," the "locking means," the "end portion of the elongate member," "integrally connecting," and the "intermediate portion."

<sup>2</sup> The terms as to which the parties are no longer in dispute, as is explained in detail below, are "elongate member," "elongate post member," the "end portion of the elongate member," and the "intermediate portion."

## II. BACKGROUND

### A. Facts

#### 1. The '230 Patent

This lawsuit centers around the '230 patent, which, according to the patent's specification, is an "invention relat[ing] to an interconnection device and method for securing a safety rail . . . to the frame of an access hatch." (Def.'s Br. Ex. A ("'230 patent"), col. 1, l. 6-10.) The specification describes the background from which the '230 patent invention emerged:

In order to comply with safety regulations it is known to secure a safety rail structure to a rigid frame which defines a roof hatch opening such as is commonly provided in a flat roof. In one known and established technique of constructing a safety rail structure, vertical posts for forming part of a safety rail assembly are welded to brackets that in turn are bolted to the hatch frame. In general[, ] on[-]site welding of the posts to the brackets is not convenient and, in the case of brackets pre[-]secured to a roof hatch, on site welding creates an unacceptable risk of damage to the roofing material surrounding the hatch. It is therefore common practice to pre-weld the posts and brackets to one another, but that results in sub-assemblies of an inconvenient shape for storage and transportation.

(Id., col. 1, l. 11-24.)

The invention contained in the '230 patent provides (1) "an improved interconnection device and method for securing a post of a safety rail assembly to a hatch structure," (id., col. 1, l. 26-29), as well as (2) a "safety rail system for an access hatch

[ ] comprising discrete and interconnectable components . . . .”<sup>3</sup>  
 (Id., col. 2, l. 47-49.) That is, the invention, through its  
 “interconnection device and method,” provides a means of  
 attaching the vertical post of a guardrail (the “safety rail”) to  
 the frame of an opening in a roof (the “hatch structure”), and  
 the invention also provides a “safety rail system” attached to  
 the interconnection device, which is composed of various  
 interconnectable parts. The parties’ disputes over claim  
 construction turn primarily over disagreements regarding the  
 terms used to describe the interconnection device itself, and the  
 method for securing that device to the vertical post of the  
 guardrail system.

The parameters of that interconnection device are described  
 in claim 1 of the ‘230 patent, which, owing to its importance in  
 this matter, is provided in full below:

A structural interconnection device for attachment of an  
 elongate member to a rigid frame of an access hatch, said  
 interconnection device comprising:

two flange portions each adapted for attachment to  
 the rigid frame, and

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<sup>3</sup> The specified “interconnectable components” are “elongate  
 post members for extending vertically in use, elongate rail  
 members for extending substantially horizontally in use,  
 connectors for interconnecting the posts and rails, and  
 structural interconnection devices to which ends of the posts may  
 be secured, said interconnection devices being of a kind in  
 accordance with the present invention and each comprising at  
 least one flange surface for securing the frame of a hatch  
 structure.” (‘230 patent, col. 2, l. 49-56.)

a receiving portion comprising locking means for selectively releasably securing thereto an end portion of an elongate member,

each said flange portion having a location surface for bearing against said rigid frame and said location surface lying, in use, in a plane which is substantially parallel with a longitudinal axis of an end portion of an elongate member secured to said receiving portion,

said plane of the location surface of one of said two flange portions lying, in use, in a plane displaced from said longitudinal axis of an end portion of the elongate member and extending substantially perpendicular relative to a plane of the location surface of an other of said two flange portions,

each of the two flange portions having a respective intermediate portion integrally connecting the location surface of said flange portion with the receiving portion, each said intermediate portion extending substantially parallel with one another and spaced apart from one another to define a void space therebetween, and

an end of the receiving portion extending beyond an edge of each flange portion location surface in the direction of said longitudinal axis.

(Id., col. 4, l. 36-64.)<sup>4</sup>

Three of the four additional claims asserted in this matter are dependent upon claim 1, and they add additional limitations or features of the design of the interconnection device. Claim 2 provides for "[a]n interconnection device according to claim 1,

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<sup>4</sup> Figure 9 of the '230 patent illustrates a preferred embodiment of the interconnection device. ('230 patent, sheet 3, figure 9.) Figure 10 of the patent illustrates the safety rail system in its entirety, with the interconnection device under examination herein labeled at 62. Figures 9 and 10 are reproduced in Appendix A of this Opinion for ease of reference.

wherein the flange and receiving portions are each formed from one of cast iron, steel or aluminium." (Id., col. 4, l. 65-67.) Claim 9 provides for "[a]n interconnection device according to claim 1, wherein an end of the receiving portion is aligned with an edge of the flange portion." (Id., col. 5, l. 26-28.) Claim 12 provides for "[t]he structural interconnection device as claimed in claim 1, wherein an angle between each said intermediate portion and each said flange portion is about 45°." (Id., col. 5, l. 49-51.) Finally, claim 11 describes the safety rail system and its constituent interconnectable parts, including "at least two of the interconnection devices as claimed in claim 1." (Id., col. 5, l. 33-48.)

## 2. Prosecution History

Initially, the claim which ultimately issued as claim 1 of the '230 patent - the claim describing the interconnection device - was rejected by the United States Patent and Trademark Office (the "Patent Office") as having been anticipated by a different patent, United States Patent No. 6,279,880 (the "'880 patent"). The '880 patent was an invention concerning "temporary guard rails used on balconies and stairways during construction as onsite temporary fall protection systems," (Def.'s Br. Ex. D, col. 1, l. 4-7), and it included the parameters for an interconnection device with certain features which bear some resemblance to the device described in claim 1 of the '230

patent. (Id. at sheet 15, figure 27.)

The applicant for the '230 patent sought reconsideration of the rejection of the patent. Specifically, the applicant made the following arguments and representations to the Patent Office:

Reconsideration and withdrawal of the rejection are respectfully requested because the reference [to the '880 patent] does not disclose or suggest that each of the two flange portions have a respective intermediate portion integrally connecting a location surface of the flange portion with a receiving portion, each intermediate portion extending substantially parallel with one another and spaced apart from another to define a void space therebetween, as recited in amended claim 5 [which was later issued as claim 1] . . . .

An advantage of two flange portions each having a respective intermediate portion integrally connecting a location surface of the flange portion with the receiving portion . . . , is that the receiving portion is more securely and stably supported than if connected to the flange portion at only a single position . . .

(Def.'s Br. Ex. G at 9-10.) The language requiring that the flange portions have "a respective intermediate portion integrally connecting the location surface of said flange portion with the receiving portion, each said intermediate portion extending substantially parallel with one another and spaced apart from one another to define a void space therebetween," ('230 patent, col. 4, l. 55-60), which did not appear in the initial patent application, was added to the resubmission of the patent application, and this claim ultimately issued as claim 1 of the '230 patent. The term "integrally connecting" is one of the terms to be construed herein.

## **B. Procedural History**

Plaintiff filed the Complaint [Docket Item 1] in this matter against Defendant on November 21, 2006, alleging that the Bil-Guard infringes on the '230 patent in violation of 35 U.S.C. §§ 271(a), (b), and (c).<sup>5</sup> In its Answer [Docket Item 4], Defendant asserted a counterclaim against Plaintiff, alleging that the '230 patent is invalid. Pursuant to Magistrate Judge Donio's November 12, 2008 Scheduling Order [Docket Item 23], the parties thereafter filed, inter alia, their opening and responding Markman briefs. The Court heard oral argument and reviewed exhibits at a Claim Construction Hearing convened on April 7, 2009, and reserved decision.

## **III. DISCUSSION**

### **A. Principles of Claim Construction**

The resolution of a litigant's patent infringement claim involves a two-step analysis:

First, the court must determine the proper construction, or meaning, of the disputed claim or claims. Second, findings must be made as to whether the accused product or method infringes the asserted claim as properly construed. See [Markman v. Westview Instruments, Inc., 517 U.S. 370, 377-90 (1996)]. Under Markman, claim construction is a matter of law to be decided only by the court, whereas the issue of infringement is a question left to the factfinder. Id.

Novartis Corp. v. Teva Pharmaceuticals USA, Inc., 565 F. Supp. 2d

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<sup>5</sup> A visual representation of the Bil-Guard, and Plaintiff's contentions concerning how the Bil-Guard infringes on the '230 patent, appears at Exhibit I of Defendant's Markman brief.



595, 602-03 (D.N.J. 2008) (footnote omitted). Only the first of these inquiries - claim construction - is at issue at the present stage of these proceedings.

"'Claim construction' is the judicial statement of what is and is not covered by the technical terms and other words of the claim." Netword, LLC v. Central Corp., 242 F.3d 1347, 1352 (Fed. Cir. 2001). To determine the proper meaning of a disputed term in a claim, the Court looks first to the "intrinsic evidence," which consists of the claim language itself, the specification, and the prosecution history. See Digital Biometrics, Inc. v. Identix, Inc., 149 F.3d 1335, 1344 (Fed. Cir. 1998). "Even within the intrinsic evidence, however, there is a hierarchy of analytical tools." Id. Above all other sources, the Court looks to "the words of the claims themselves to define the scope of the patented invention." Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (also noting that "[i]t is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude") (internal quotations and citations omitted). In interpreting a claim term, the Court's task is to give the term "the ordinary and customary meaning . . . that the term would have to a person of ordinary skill in the art in question

at the time of the invention.”<sup>6</sup> Id. at 1313.

“Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” Id.

The specification contains a written description of the invention which must be clear and complete enough to enable those of ordinary skill in the art to make and use it. Thus, the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.

Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). Accordingly, in interpreting the meaning of a patent’s terms, the Court must consult the specification in order to determine whether it “expressly defines terms used in the claims or . . . [whether] it defines terms by implication.”<sup>7</sup> Id.

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<sup>6</sup> Although ascertaining the ordinary meaning of a claim term often “requires examination of terms that have a particular meaning in a field of art,” Phillips, 415 F.3d at 1314, the Court of Appeals for the Federal Circuit has also recognized, “[s]ensibly enough, . . . that dictionary definitions may establish a claim term’s ordinary meaning.” CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002). The Court may “rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.” Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1384 n.6 (Fed. Cir. 1996).

<sup>7</sup> Importantly, however, as is explained below, although “the written description [in the specification] can provide guidance as to the meaning of the claims,” SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1344 (Fed.Cir. 2001), the “general rule . . . is that the claims of a patent are not limited to the preferred embodiment” of the

In addition to the language of the claims and the specification, the intrinsic evidence for claim construction purposes includes a patent's prosecution history, if such history is in evidence. Id. The prosecution history "consists of all express representations made by or on behalf of the applicant to the [patent] examiner to induce a patent grant." Howmedica Osteonics Corp. v. Wright Medical Technology, Inc., 540 F.3d 1337, 1346 (Fed. Cir. 2008) (internal quotations and citations omitted). The prosecution history may be particularly relevant during claim construction, under the doctrine of prosecution disclaimer, which holds that "claims that have been narrowed in order to obtain the issuance of a patent by distinguishing the prior art cannot be sustained to cover that which was previously by limitation eliminated from the patent."<sup>8</sup> Omega Engineering, Inc. v. Raytek Corp., 334 F.3d 1314, 1323 (Fed. Cir. 2003)

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invention described in the specification. Karlin Tech. Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 973 (Fed. Cir. 1999).

<sup>8</sup> As a court in this District recently explained:

It is important to note, however, that there is a distinction between construing the claims in light of their prosecution history and applying the doctrine of prosecution history estoppel. Courts consult the prosecution history of a patent during claim construction, while they apply the doctrine of prosecution history estoppel only during trial as a measure to prevent a patentee from improperly benefitting from the doctrine of equivalents.

Novartis, 565 F. Supp. 2d at 606 (footnotes and citations omitted).

(quoting Graham v. John Deere Co., 383 U.S. 1, 33 (1966)). The Federal Circuit has cautioned, however, that “because the prosecution history represents an ongoing negotiation between the [Patent Office] and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” Phillips, 415 F.3d at 1317. Thus, unless the prosecution history establishes that “the patentee has unequivocally disavowed a certain meaning to obtain his patent,” the Court should decline to apply the doctrine of prosecution disclaimer in construing a patent’s terms. Omega, 334 F.3d at 1324 (emphasis added).

Finally, if the intrinsic evidence fails to disclose the meaning of a claim’s terms, a court may look to “extrinsic evidence, such as expert and inventor testimony, dictionaries, and learned treatises.” Novartis, 565 F. Supp. 2d at 607. As a general matter, the utility of extrinsic evidence is limited in defining a claim term,<sup>9</sup> although it “can shed useful light on the relevant art.” Phillips, 415 F.3d at 1317 (citation omitted). This is because “[i]n most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term,” and “[i]n such circumstances, it is improper to rely on extrinsic evidence.” Vitronics, 90 F.3d at 1383.

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<sup>9</sup> But see Note 6, supra.

## B. Construction of Claim Terms

The parties originally disputed the meaning of eight terms that appear in the claims of the '230 patent: "elongate member," "elongate post member," the "receiving portion," the "end of the receiving portion," the "locking means," the "end portion of the elongate member," "integrally connecting," and the "intermediate portion." At the Markman hearing, the parties were able to resolve their disagreements over the construction of four of these terms - "elongate member," "elongate post member," the "end portion of the elongate member," and the "intermediate portion" - and the Court will adopt these consented-to constructions. The Court reviews the agreed upon constructions of the non-disputed terms, and addresses the construction of those terms as to which the parties remain in dispute, in turn below.

1. Terms as to Which the Parties are No Longer in Dispute: "Elongate Member," "Elongate Post Member," "End Portion of the Elongate Member," and "Intermediate Portion"

In their Markman briefs, the parties originally contested the construction of the claim terms "elongate member," "elongate post member," "end portion of the elongate member," and "intermediate portion. At the April 7, 2009 hearing, however, the parties resolved their disagreement over the construction of these terms. The Court accordingly adopts the non-disputed construction of these terms that the parties have proposed.

An "elongate member" is "a vertical post of a safety railing

structure." An "elongate post member" is "the vertical post of the safety rail structure and corresponds to the 'elongate member' as construed above." The "end portion of the elongate member" is "the lower end of the vertical post of a safety rail structure, as construed above." The "intermediate portion" is "the portion substantially in the middle position between the receiving portion and the flange portions."

## 2. "Receiving Portion"

Plaintiff's proposed construction of the term "receiving portion" is "a part of the structural connection device that holds or supports an end portion of an elongate member." (Pl.'s Br. at 8.) Defendant's proposed construction is "that portion of the bracket ('structural interconnection device') that receives the end portion of the vertical post ('elongate member') as construed above. The 'receiving portion' includes a bore sized to receive the 'end of the elongate member,' as construed above, and includes walls of sufficient thickness around the bore to have threaded openings for grub screws forming the 'locking means' as construed below." (Def.'s Br. at 13.)

The heart of the parties' dispute over the term "receiving portion" is whether the '230 patent requires that the end portion of the elongate member be inserted into the receiving portion itself, or whether the receiving portion must merely support or hold the end portion of the elongate member. There appears to be

no disagreement between the parties that the receiving portion must support the end portion of the elongate member, and the claims consistently refer to the end of the elongate member being "secured to" the receiving portion. ('230 patent, col. 4, l. 48.) The question raised by the parties' competing approaches to construing the term is thus whether, in addition to holding/supporting the end portion of the elongate member, the receiving portion must, as Defendant argues, be able to take in or contain (as a receptacle) the end portion of the elongate member. The ordinary meaning of the word "receive" can be read to support either construction. See Webster's New Int'l Dictionary 1894 (3d ed. 1993) (defining "receive" alternatively as "to take in: act as a receptacle or container for," or "to support the weight or pressure of: bear").<sup>10</sup>

Plaintiff argues that the only bases for Defendant's assertions that the receiving portion must be able to take in or contain the end portion of the elongate member are the descriptions of preferred embodiments of the structural interconnection device in the specification and the deposition testimony of the inventors as to their intentions in utilizing

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<sup>10</sup> Reliance on the dictionary definition for the construction of these terms is appropriate here, where there is no suggestion from the remainder of the intrinsic evidence that the words were used "idiosyncratically," Phillips, 415 F.3d at 1314, and where "the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." Vitronics, 90 F.3d at 1384 n.6.

the term. Plaintiff is correct that neither of these sources is sufficient, in itself, to confine the scope of the claims. While it is true that the preferred embodiment of the receiving portion set forth in the specification describes "a tubular shaped formation into which the end portion of the elongate member may be received," ('230 patent, col. 2, l. 1-3), it is well-settled that the "general rule . . . is that the claims of a patent are not limited to the preferred embodiment" of the invention described in the specification. Karlin Tech. Inc., 177 F.3d at 973. Additionally, Defendant's reliance upon the inventors' deposition testimony to derive their intent in using particular claim terms is misplaced, because the "subjective intent of the inventor when he used a particular term is . . . irrelevant to the issue of claim construction." Howmedica, 540 F.3d at 1346-47 (internal quotations and citations omitted).<sup>11</sup> If the specification's preferred embodiment and the inventors' testimony were the only sources of support for Defendant's proposed

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<sup>11</sup> While inventor testimony "may be pertinent as a form of expert testimony, for example, as to understanding the established meaning of particular terms in the relevant art," Howmedica, 540 F.3d at 1347 n.5, there is no suggestion from the cited testimony that the inventors were speaking about such "established meaning . . . in the relevant art," as opposed to their own subjective intent in using the terms. Id. In the absence of a stronger indication that the inventors were addressing the established meaning of these terms in the relevant art, the Court will heed the caution prescribed by the Court of Appeals for the Federal Circuit, and will not rely upon the inventors' testimony in construing the disputed claim terms.



construction of the term "receiving portion," then such a construction would be unsupportable.

As the Court now explains, however, the requirement that the receiving portion be able to take in or contain the end portion of the elongate member finds support in "the words of the claims themselves," Phillips, 415 F.3d at 1312, and the specification's "written description of the invention." Vitronics, 90 F.3d at 1382. Specifically, the use of the word "receive" in the unasserted claims of the '230 patent, as well as in the specification, leaves little doubt that the term, as it is used in the patent as a whole, encompasses taking in as well as holding/supporting. See Phillips, 415 F.3d at 1314 ("Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims"); Cf. Chamberlain Group, Inc. v. Lear Corp., 516 F.3d 1331, 1337 (Fed. Cir. 2008) ("the 544 patent's term 'trinary code' is relevant to construing 'binary code' because the term 'code' presumptively should carry the same meaning throughout the patent") (citation omitted). The '230 patent repeatedly refers to an object being received into the receiving portion. In claim 3, for example, which is not asserted in this lawsuit, see Phillips, 415 F.3d at 1314 ("[o]ther claims of the patent in question, both asserted and unasserted, can . . . be valuable sources of enlightenment as to

the meaning of a claim term"), the patent describes a limitation in which the "receiving portion comprises a tubular shaped formation into which the end portion of an elongate portion may be received." ('230 patent, col. 5, l. 2-4) (emphasis added). Likewise, in the specification's description of the locking means, the patent states that the locking means comprises "at least one screw threaded aperture formed in a wall portion of the receiving portion and into which a grub screw or like member may be received and rotated to bear at an inner end against the surface of an end portion of an elongate member." (Id. at col. 2, l. 9-13) (emphasis added).

The word "received" in this context necessarily designates the act of taking in an inserted object through an opening. That is, if the '230 patent's use of the term "receiving" were intended solely to signify the act of supporting, then in describing the act of placing screws or elongate members into holes in the receiving portion, the patent could easily have used the word "inserted" - i.e., "an aperture into which a grub screw or like member may be *inserted*." In view of the presumption that "claim terms are normally used consistently throughout the patent," Phillips, 415 F.3d at 1314, the '230 patent's repeated use of the word "receive" to signify the act of taking in an inserted item provides strong support for a construction of the term "receiving portion" which requires that the portion be able

to take in or contain the end portion of the elongate member. Because the term "receive" "presumptively should carry the same meaning throughout the patent," Chamberlain, 516 F.3d at 1337, the use of the term to signify taking in an inserted object in claim 3 and in the specification indicates that the term "receiving portion" must be construed to permit the portion to take in or contain the end portion of the elongate member through an opening in the receiving portion.

Plaintiff's argument to the contrary is not persuasive. Plaintiff draws the Court's attention to claim 3, which is dependent upon claim 1, and which, as noted above, asserts an additional limitation in which "the receiving portion comprises a tubular shaped formation into which the end portion of an elongate portion may be received." ('230 patent, col. 5, l. 2-4.) Plaintiff, relying on the principle of claim differentiation,<sup>12</sup> suggests that claim 3 would be rendered redundant if the receiving portion were, by definition, required to take in or contain the end portion of the elongate member.

Plaintiff's reliance on the doctrine of claim differentiation is misplaced. The limitation added by claim 3 is that the opening into which the elongate member is received is "a

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<sup>12</sup> See Phillips, 415 F.3d at 1314-15 ("the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim").

tubular shaped formation." ('230 patent, col. 5, l. 2-3.) This limitation is to be contrasted with other variations in the shape of the space in the receiving portion into which the elongate member is received, which is described in separate claims, as summarized in the specification:

The receiving portion may comprise a tubular shaped formation into which the end portion of an elongate member may be received. Said receiving portion may comprise a bore of circular or, for example square cross-section. The bore may be of uniform dimension along its length, or it may be formed with axially spaced ribs that extend inwards and provide bearing surface regions for contact by the end portion of the elongate member.

(Id. at col. 2, l. 1-8.) The limitation added by claim 3 - the specified "tubular shaped formation" - is not rendered redundant by a construction that requires the receiving portion to take in or contain the end portion of the elongate member; claim 3 adds specificity to the "formation" into which the elongate member is inserted (i.e., that it is "tubular shaped").

While the Court will therefore construe the term "receiving portion" to require a structure which can take in or contain the end portion of the elongate member, Plaintiff is correct that Defendant's proposed construction improperly incorporates criteria for the locking means into the definition of the receiving portion. Claim 1 explains that the interconnection device includes "a receiving portion comprising [a] locking means . . . ." ('230 patent, col. 4, l. 41-42.) "In the patent claim context the term 'comprising' is well understood to mean

'including but not limited to.'" CIAS, Inc. v. Alliance Gaming Corp., 504 F.3d 1356, 1360 (Fed. Cir. 2007) (citation omitted). While the receiving portion in this patent thus includes (but is not limited to) a locking means, if the definition of "receiving portion" inherently encompassed a locking means, then the "comprising locking means" language in claim 1 would be redundant. See Phillips, 415 F.3d at 1314 ("the claim in this case refers to 'steel baffles,' which strongly implies that the term 'baffles' does not inherently mean objects made of steel").

Based on the above considerations, the Court will adopt the following construction of the term "receiving portion": "the part of the structural interconnection device which takes in the inserted end portion of an elongate member, and which holds or supports the end portion of the elongate member."

### 3. "End of the Receiving Portion"

The parties agree that their disagreement over the construction of the term "end of the receiving portion" turns exclusively on the construction of the term "receiving portion." (Pl.'s Reply Br. at 10; Def.'s Reply Br. at 12.) As Plaintiff indicates in its reply brief, "[t]he end of the receiving portion is, as Defendant points out, the top or bottom horizontal surface of the receiving portion of the interconnecting device." (Pl.'s Reply Br. at 10.) The Court will accordingly adopt the following construction of the term "end of the receiving portion": "the top

or bottom horizontal surface of the receiving portion of the structural interconnection device."

4. "Locking Means"

Plaintiff proposes that the Court construe the term "locking means" as "a mechanism that securely holds something else or puts it into a fixed position." (Pl.'s Br. at 12.) Defendant proposes the following construction: "one or more screw threaded apertures with a corresponding screw extending horizontally and perpendicularly completely through a wall of a bore in the receiving portion. The end of each screw must extend into the bore to contact the end of the vertical post and lock it within the bore. The grub screw must be able to move horizontally away from and out of contact with the end of the vertical post to release the post from the bore."<sup>13</sup> (Def.'s Br. at 16.)

As an initial matter, Defendant is correct that the term "locking means" must be construed as a means-plus-function limitation under 35 U.S.C. § 112, ¶ 6.<sup>14</sup> In paragraph 6 of

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<sup>13</sup> In its reply brief, Plaintiff states that "[a]s a compromise," it can agree to the following definition of the term: "a screw threaded into an aperture for securely holding something else or for putting it into a fixed position." (Pl.'s Reply Br. at 7-8.)

<sup>14</sup> Paragraph six of section 112 provides:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts

section 112, "Congress permitted the use of purely functional language in claims, but it limited the breadth of such claim language by restricting its scope to the structure disclosed in the specification and equivalents thereof." Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1582 (Fed. Cir. 1996) (emphasis added).

The question whether a claim element triggers section 112(6) is ordinarily not a difficult one. Claim drafters conventionally use the preface "means for" (or "step for") when they intend to invoke section 112(6), and there is therefore seldom any confusion about whether section 112(6) applies to a particular element.

Id. at 1583; see also CCS Fitness, 288 F.3d at 1369 ("A claim limitation that actually uses the word 'means' will invoke a rebuttable presumption that § 112 ¶ 6 applies"). The claim limitation herein provides for a "locking means for selectively releasably securing" an elongate member, ('230 patent, col. 4, l. 41-42), "without the recital of structure, material, or acts in support thereof," § 112, thereby triggering the means-plus-function construction analysis.

The Court of Appeals for the Federal Circuit summarized the standard for means-plus-function claim construction in Wenger Mfg., Inc. v. Coating Machinery Systems, Inc.:

In construing a means-plus-function limitation, a court must identify both the claimed function and the

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described in the specification and equivalents thereof.

35 U.S.C. § 112.

corresponding structure in the written description for performing that function. Under § 112, ¶ 6, a court may not import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the claimed function.

239 F.3d 1225, 1233 (Fed. Cir. 2001) (internal quotations and citations omitted).

Applying these considerations to the phrase "locking means for selectively releasably securing [to the receiving portion] an end portion of an elongate member," ('230 patent, col. 4, l. 41-43), it is readily apparent that the "functional limitations . . . recited in the claim," Wenger, 239 F.3d at 1233, are "selectively releasably securing" the end portion of an elongate member to the receiving portion. As Defendant correctly argues, this language in the claim indicates that the locking means performs a series of related functions: it must secure the end portion of the elongate member to the receiving portion, it must permit the elongate member to be released from the receiving portion, and it must permit these functions to be performed selectively - that is, it must permit the selection between the securing and releasing functions.

Having identified the functional limitations recited in the claim, the Court must identify the "corresponding structure in the written description for performing that function," looking only to those "structural limitations from the written description that are []necessary to perform the claimed



function.” Wenger, 239 F.3d at 1233. The specification provides the following description of the structure for performing the “selectively releasably securing” function: “The locking means may, for example, comprise at least one screw threaded aperture formed in a wall portion of the receiving portion and into which a grub screw or like member may be received and rotated to bear at an inner end against the surface of an end portion of an elongate member.” (’230 patent, col. 2, l. 9-13.) Each of the structural elements described in this statement is necessary to the performance of the claimed function, see Wenger, 239 F.3d at 1233 – the aperture in the wall of the receiving portion permits the insertion of the screw, the rotation of the screw permits the selective and releasable securing of the elongate member, and the fact that the screw reaches and is able to bear against the surface of the elongate member enables the screw to secure the member.<sup>15</sup>

Defendant’s proposal that the construction of “locking means” include the requirement that the screw be inserted

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<sup>15</sup> While the specification provides for additional limitations as to the potential locations of the apertures, (id. at col. 2, l. 14-17 and 35-39), such potential additional structural limitations are “unnecessary to perform the claimed function” of selectively releasably securing the end portion of the elongate member. Wenger, 239 F.3d at 1233. That is, the selectively releasably securing function can be performed regardless of the precise axial placement of the apertures, indicating that the additional limitations described in the specification are not properly imported into the claim construction. Id.

horizontally into the receiving portion is not supported by the text of the specification. Although the visual representations of the preferred embodiment depict apertures in which the screws are inserted horizontally, there is no suggestion from the specification that such horizontal insertion is "[n]ecessary to perform the claimed function."<sup>16</sup> Wenger, 239 F.3d at 1233. The Court thus declines to construe the "locking means" term as entailing a requirement that the apertures provide for the horizontal insertion of the screws.

In its reply brief, Plaintiff indicates that it would agree to the following definition of the term: "a screw threaded into an aperture for securely holding something else or for putting it into a fixed position." (Pl.'s Reply Br. at 7-8) (emphasis added). Plaintiff's proposed compromise construction, and, in particular, its provision that the locking means merely hold "something else," is unhelpfully elliptical. It is well-established that "[f]or means-plus-function elements, which are statutorily limited to the 'corresponding structure, material, or acts described in the specification and equivalents thereof,' 35 U.S.C. § 112, ¶ 6, section 112, ¶ 2 requires that the specification must permit one of ordinary skill in the art to know and understand what structure corresponds to the means

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<sup>16</sup> It is not inconceivable, for example, that screws inserted through diagonal apertures could adequately perform the selectively releasably securing function.

limitation.” Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1340 (Fed. Cir. 2008) (some internal quotations and citations omitted, emphasis added). The upshot of the lack of specificity in Plaintiff’s proposed construction is that the proposed language fails to “limit[] the breadth of [the functional] claim language by restricting its scope to the structure disclosed in the specification and equivalents thereof.” Greenberg, 91 F.3d at 1582. The function of selectively releasably securing the end of the elongate member to the receiving portion is not captured by a vague description of an unidentified structure with an unspecified aperture through which a screw is inserted to hold “something else.” (Pl.’s Reply Br. at 7-8.) The function which the structure in question must perform is more specific: it must selectively releasably secure the end portion of the elongate member to the receiving portion.

For the foregoing reasons, the Court adopts the following construction of the term “locking means”: “one or more screw-threaded apertures in the wall of the receiving portion with a corresponding screw that may be inserted through the wall of the receiving portion and into contact with the inserted end portion of the elongate member securing the member, and when screwed out releasing the member from the receiving portion.”

##### 5. “Integrally Connecting”

In the ’230 patent, the flange portions are attached to the

receiving portion by intermediate portions "integrally connecting" the separate sections. ('230 patent, col. 4, l. 56.) Plaintiff proposes that the term "integrally connecting" means "the joining together of parts to form a whole." (Pl.'s Br. at 17.) Defendant proposes that the term "requires a rigid, one-piece connection between the intermediate portion, a corresponding flange and the receiving portion. The integral connection between the intermediate portion, the flange and the receiving portion performs the function of securely and stably holding the bore of the receiving portion immovable relative to its flange with a single integrated piece construction." (Def.'s Br. at 21-22.) The central point of disagreement between the parties as to the construction of the term "integrally connecting" is whether the connecting of two originally distinct pieces (as by welding, for example) is, as Plaintiff argues, sufficient for those pieces to become "integrally" connected, or whether, as Defendant argues,<sup>17</sup> an integral connection requires that the connected elements be formed as one piece (as by

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<sup>17</sup> Defendant's proposed construction, which unhelpfully attempts to define "integrally" by requiring an "integral connection" and "a single integrated piece construction," (Def.'s Br. at 21-22), does not on its face state that welding fails to satisfy the integral connection criterion. Defendant's written submissions make clear, however, that it believes the construction of "integrally connected" requires a unitary construction, as by casting.

casting, for example).<sup>18</sup>

As an initial matter, Plaintiff's proposed definition, which simply requires that parts be joined to form a whole, is insufficiently specific to capture the meaning of "integrally connecting" in the context of the '230 patent. As one court recently explained when rejecting a similar proposed construction<sup>19</sup> as insufficient to construe the significance of the term "integrally":

The definition offered by BMS just does not go far enough. It would include any type of connection, including exterior screws attaching a connecting plate, a loose dowel with removable discs, a C-clamp, or one of the wide black clips used to bind papers . . . . [I]f "attached" or "connected" is all that is meant, then what purpose is served by "integrally?" . . . . "Integrally" implies something that is part of the whole or is needed for completeness. See Merriam-Websters Collegiate Dictionary 606 (10th ed. 2002). However, . . . integrally is not being used in this patent merely in the sense of a cog inside a machine, which is "integral" to the mechanism, but is a separate moving part.

Burns, Morris & Stewart Ltd. Partnership v. Masonite Intern. Corp., 401 F. Supp. 2d 692, 699-700 (E.D. Tex. 2005). As in Burns, the construction of "integrally connecting" in the '230

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<sup>18</sup> The common definition of "integral" supports either construction. See Webster's New Int'l Dictionary 1173 (3d ed. 1993) (defining "integral" as, inter alia, "of, relating to, or serving to form a whole," "formed as a unit with another part," or "essential to completeness").

<sup>19</sup> The proposed construction was "[c]onnected together so as make up a single complete piece or unit, or so as to work together as a single complete piece or unit." Burns, Morris & Stewart Ltd. Partnership v. Masonite Intern. Corp., 401 F. Supp. 2d 692, 699 (E.D. Tex. 2005).

patent must amount to more than the mere attachment to form a whole, if the word "integrally" is to have any significance. The term "integrally connecting" requires that the connected pieces be joined "so as to make up a single complete piece or unit, in such a way that the connection becomes part of [the single complete unit]." Id. at 701 (emphasis added).

On the other hand, the insufficiency of Plaintiff's proposed construction does not, as Defendant argues, indicate that the patent's "integrally connecting" criterion can be satisfied only through single-piece construction, as by casting out of molten metal.<sup>20</sup> First, in light of the fact that claim 2 of the '230 patent, which is dependent upon claim 1, provides the additional limitation of "[a]n interconnection device according to claim 1, wherein the flange and receiving portions are each formed from one of cast iron, steel or aluminium," ('230 patent, col. 4, l. 65-67), the doctrine of claim differentiation forecloses a construction of "integrally connecting" that requires construction by casting. See Phillips, 415 F.3d at 1314-15 ("the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is

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<sup>20</sup> Once again, Defendant relies upon the testimony of the inventors regarding their intent behind the use of the term "integrally connecting" in its claim construction analysis. As the Court noted, supra, such testimony is "irrelevant" to the claim construction questions before the Court. Howmedica, 540 F.3d at 1346-47.

not present in the independent claim").<sup>21</sup>

More generally, the Court of Appeals for the Federal Circuit has made clear that the term "integrally" is not inherently so limited:

[O]ur predecessor court had on several prior occasions interpreted the term "integral" to cover more than a unitary construction. See, e.g., In re Kohno, 55 C.C.P.A. 998, 391 F.2d 959, 157 USPQ 275 (CCPA 1968), In re Dike, 55 C.C.P.A. 1172, 394 F.2d 584, 157 USPQ 581 (CCPA 1968), In re Larson, 52 C.C.P.A. 930, 340 F.2d 965, 144 USPQ 347 (CCPA 1965), and In re Clark, 41 C.C.P.A.

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<sup>21</sup> Contrary to Defendant's argument, the prosecution history of the '230 patent does little to clarify the meaning of the term "integrally connecting." It is true that the term was added in response to a prior rejection by the Patent Office, but the emphasis in the patent applicant's representations to the patent examiner was on the '230 patent's dual, parallel intermediate portions, not on the concept of integral connection:

An advantage of two flange portions each having a respective intermediate portion integrally connecting a location surface of the flange portion with the receiving portion as recited in claim 5, is that the receiving portion is more securely and stably supported than if connected to the flange portion at only a single position  
 . . .

(Def.'s Br. Ex. G at 9-10) (emphasis added). The stage at which the "integrally formed" language was added to the '230 patent does not, in this case, clarify what the language encompasses; it merely begs the question of what "integrally connecting" means. The Court of Appeals for the Federal Circuit has cautioned against relying upon the prosecution history to narrow the scope of a claim "where the alleged disavowal of claim scope is ambiguous," or where remarks made by an inventor to overcome a rejection may be viewed "as amenable to multiple reasonable interpretations." Omega, 334 F.3d at 1324. Given that the emphasis in the above-quoted prosecution history focuses on the fact that the '230 patent provides for flange portions connected at two points to the receiving portion, the Court finds that it illuminates little as to the proper construction of the term "integrally connecting."

974, 214 F.2d 148, 102 USPQ 241 (CCPA 1954). This court has also endorsed that interpretation. See, e.g., Advanced Cardiovascular Sys. v. Scimed Life Sys., 887 F.2d 1070, 1074 (Fed. Cir. 1989) (nothing of record limited "integral" to mean "of one-piece" construction).

In re Morris, 127 F.3d 1048, 1055-56 (Fed. Cir. 1997); see also Pressure Products Medical Supplies, Inc. v. Enpath Medical, Inc., No. 06-121, 2008 WL 744250, at \*9 (E.D. Tex. Mar. 19, 2008) (same); Outillage v. Penn Tool Co., Inc., No. 03-6299, 2004 WL 5644803, at \*7 (C.D. Cal. Mar. 22, 2004) (same).

The Court is thus unpersuaded by Defendant's argument that the term "integrally connecting" is limited to "unitary construction," as by casting from molten metal, In re Morris, 127 F.3d at 1055, but it agrees with Defendant that the term requires more than the mere attachment of two objects to form a whole. As Plaintiff recognized at the Markman hearing, a person of ordinary skill in the art would recognize that being "integrally connecting" connotes something more than simply being connected - it requires, as Plaintiff conceded, a more permanent type of fastening. This is consistent with the commonly understood meaning of "integral," which is "essential to completeness," Webster's New Int'l Dictionary 1173 (3d ed. 1993); if a constituent part of an integrated whole is essential to the unit's completeness, the term "integral" signifies a state of permanence or, at minimum, an inability to sever the connected portion without destroying the unit. This aspect of the



construction of "integral" was recognized in Burns, Morris & Stewart Ltd. Partnership v. Endura Products, Inc., wherein the court construed the term "integrally formed" to mean "connected together so as to make up a single complete piece or unit, or so as to work together as a single complete piece or unit, and so as to be incapable of being easily dismantled without destroying the integrity of the piece or unit." No. 04-23, 2005 WL 6217425, at \*8 (E.D. Tex. May 11, 2005) (emphasis added).

Based on the foregoing considerations, the Court will construe the term "integrally connecting" as follows: "joined together so as to make up a single, complete, and substantially permanent piece or unit, such that the connected components become an essential part of the complete unit, and such that the complete unit is incapable of being easily dismantled without destroying the unit."

#### **IV. CONCLUSION**

For the reasons explained above, the Court adopts the following constructions of the disputed claim terms for the '230

patent:

1. The term "elongate member" is properly construed to mean "a vertical post of a safety railing structure."
2. The term "elongate post member" is properly construed to mean "the vertical post of the safety rail structure and corresponds to the 'elongate member' as construed

above."

3. The term "end portion of the elongate member" is properly construed to mean "the lower end of the vertical post of a safety rail structure, as construed above."
4. The term "intermediate portion" is properly construed to mean "the portion substantially in the middle position between the receiving portion and the flange portions."
5. The term "receiving portion" is properly construed to mean "the part of the structural interconnection device which takes in the inserted end portion of an elongate member, and which holds or supports the end portion of the elongate member."
6. The term "end of the receiving portion" is properly construed to mean "the top or bottom horizontal surface of the receiving portion of the structural interconnection device."
7. The term "locking means" is properly construed to mean "one or more screw-threaded apertures in the wall of the receiving portion with a corresponding screw that may be inserted through the wall of the receiving portion and into contact with the inserted end portion of the elongate member securing the member, and when screwed out releasing the member from the receiving portion."
8. The term "integrally connecting" is properly construed to mean "joined together so as to make up a single, complete, and substantially permanent piece or unit, such that the connected components become an essential part of the complete unit, and such that the complete unit is incapable of being easily dismantled without destroying the unit."

The accompanying Order is entered.

**April 8, 2009**

Date

**s/ Jerome B. Simandle**

JEROME B. SIMANDLE

United States District Judge

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEW JERSEY

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SAFETY RAIL SOURCE, LLC,

Plaintiff,

v.

BILCO COMPANY,

Defendant.

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HON. JEROME B. SIMANDLE

Civil No. 06-5598 (JBS)

**APPENDIX A**

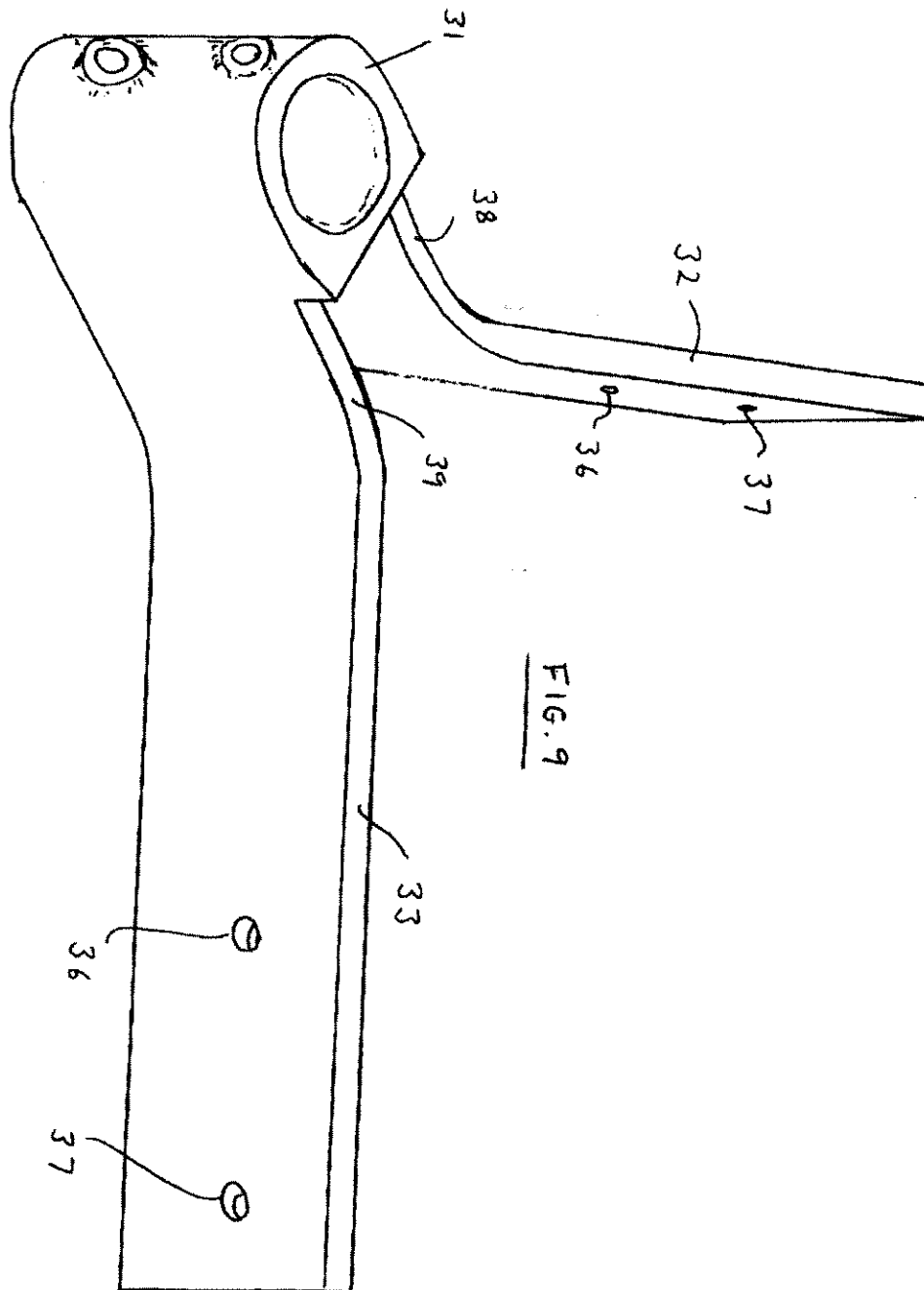


FIG. 9

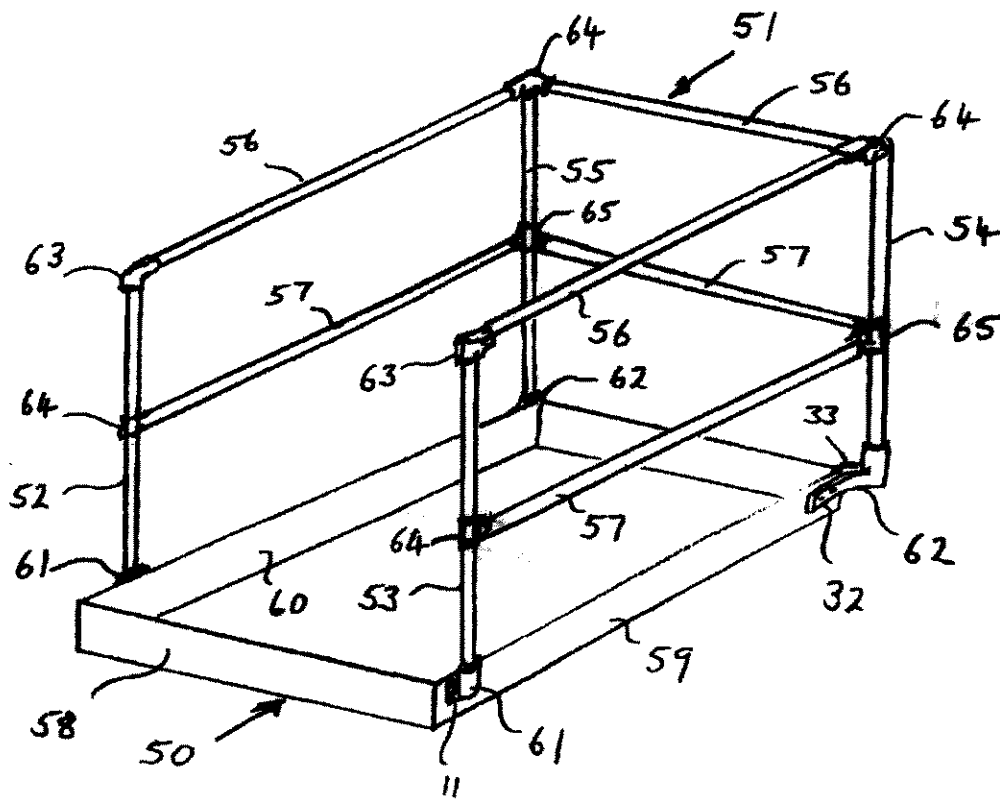


FIG. 10